

ABSTRACT OF THE DISCLOSURE

A chemical analysis system includes a spotting mechanism for spotting a sample liquid onto a first chemical analysis element for measuring the concentration of a specific component contained in the sample liquid, and for spotting a sample liquid and a reference liquid onto a second chemical analysis element for measuring the activity of a specific ion contained in the sample liquid. The first chemical analysis element spotted with the sample liquid and the second chemical analysis element spotted with the sample liquid and the reference liquid are placed in an incubator and is incubated at a constant temperature. A concentration measuring system is provided to measure the concentration of the specific component contained in the sample liquid by measuring the optical density of the color formed by the coloring reaction of the sample liquid and a reagent on the first chemical analysis element after incubation in the incubator, and an ionic activity measuring system is provided to measure the ionic activity of the specific ion contained in the sample liquid after incubation in the incubator. A temperature controller holds the first and second chemical analysis element at a predetermined temperature.